

Abstract of the Disclosure

The invention has such a double hetero structure (11) that an active layer (3) is sandwiched by an n-type clad layer (2) and a p-type clad layer (4) on a semiconductor substrate (1) made of GaAs. In the p-type clad layer (4), for example, an n-type current constriction layer (6) consisting of at least two layers is provided in such a configuration that a first layer (6a) thereof closer to the active layer is made of a material having almost the same refractive index as the p-type clad layer and a second layer (6b) thereof farther from the active layer is made of a material having a smaller refractive index than the first layer (6a). By this configuration, a self-excitement type and high-power semiconductor laser can be obtained which operates in a stable manner up to a high power without generating a kink while being self-excited at a low power. Another embodiment of the invention comprises a current constriction layer having an n-type in which a stripe trench is formed in the p-type clad layer, and a light confinement layer having a smaller refractive index than the p-type clad layer is formed at the current constriction layer facing the active layer, so as to be of a p-type or non-doped type. By this configuration, a semiconductor laser can be obtained which operates up to a high power without generating a kink.